

Amendments to the Drawings

The attached sheet of drawings includes a change to Fig. 17. This sheet replaces the original sheet including Fig. 17. The legend "Prior Art" is added to Fig. 17.

Attachment: Replacement Sheet

REMARKS

I. Introduction

Claims 1-40 are pending in this application. Of those claims, claims 7, 8, 18, and 23-30 have been withdrawn from consideration pursuant to the provisions of 37 C.F.R. §1.142(b). Applicants acknowledge, with appreciation, the Examiner's allowance of claims 20-22, 31-35, 36/20, 37/20, and 38/20. Applicants also acknowledge, with appreciation, the Examiner's indication that claim 37/2 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In this Amendment, claims 1, 2, and 39 have been amended. Care has been exercised to avoid the introduction of new matter. Support for the amendment can be found on, for example, page 36, line 13 to page 37, line 3 of the specification.

II. The Objection to the Drawings

Fig. 17 has been amended to include the legend "Prior Art," in response to the Examiner's objection to the drawings. Accordingly, withdrawal of the objections to the drawings is respectfully solicited.

III. The Objection to the Specification

In response to the Examiner's objection to the abstract of the disclosure, Applicants have amended the abstract to meet the requirement under 37 C.F.R. §1.72. Withdrawal of the objection to the specification is, therefore, respectfully solicited.

IV. The Rejection of Claims 1-6, 14, 16, 17, 19, 39, and 40

Claims 1-6, 14, 16, 17, 19, 39, and 40 have been rejected under 35 U.S.C. §102(e) as being anticipated by Machida et al. In the statement of the rejection, the Examiner asserted that Machida et al. identically disclose the claimed invention.

Independent Claim 1

Applicants submit that Machida et al. do not disclose a display device including all the limitations recited in independent claim 1, as amended. Specifically, Machida et al. do not disclose, at a minimum, “a particle utilization-promoting means for preventing the number of particles contributing to the display from decreasing using at least an element other than the electrodes provided on the pair of substrates,” recited in claim 1. The element other than the electrodes provided on the pair of the substrates promotes the particle utilization, in addition to the promotion of the particle utilization with the electrodes provided on the pair of substrates.

Machida et al. disclose preventing particles from coagulating by applying an alternating voltage between an electrode provided on a front substrate and an electrode provided on a back substrate. However, Machida et al. do not disclose any element for preventing particles from coagulating in addition to the electrodes on the front and back substrates. In contrast, the claimed invention has “a particle utilization-promoting means for preventing the number of particles contributing to the display from decreasing using at least an element other than the electrodes provided on the pair of substrates,” as claimed (emphasis added). Accordingly, Machida et al. do not disclose a display device including all the limitations recited in independent claim 1, as amended.

Independent Claims 2 and 39, and Dependent Claims 3-6, 14, 16-19

Applicants submit that Machida et al. do not disclose a display device including all the limitations recited in independent claim 2, as amended. Specifically, Machida et al. do not disclose, at a minimum, “a vibration-generating portion provided so as to face a space in which the group of particles travel and configured to generate a mechanical vibration using at least an element other than the electrodes provided on the pair of substrates,” recited in claim 2. Some electrodes provided on a pair of substrates cannot sufficiently generate a mechanical vibration. However, the claimed invention having the vibration-generating portion configured to generate a mechanical vibration using an element other than the electrodes provided on the pair of substrates can sufficiently generate a mechanical vibration. This prevents particles from coagulating, resulting in improvement in display unevenness and degradation of contrast.

As mentioned above, Machida et al. disclose preventing particles from coagulating by applying an alternating voltage between an electrode provided on a front substrate and an electrode provided on a back substrate. However, Machida et al. do not disclose any element for generating a mechanical vibration to prevent particles from coagulating in addition to the electrodes on the front and back substrates. In contrast, the claimed invention has “a particle utilization-promoting means... configured to generate a mechanical vibration using at least an element other than the electrodes provided on the pair of substrates” (emphasis added). Accordingly, Machida et al. do not disclose a display device including all the limitations recited in independent claim 2, as amended.

Applicants further submit that Machida et al. do not disclose a method of manufacturing a display device recited in independent claim 39. For the reason set forth with respect to the rejection of claim 2, Machida et al. do not disclose a method for manufacturing a display device

including a step to generate vibration by the vibration-generating portion “configured to generate a mechanical vibration using at least an element other than the electrodes provided on the pair of substrates,” as recited in claim 39. Accordingly, Machida et al. do not disclose a method of manufacturing a display device including all the limitations recited in independent claim 39, as amended.

It is further noted that dependent claims 3-6, 14, and 16-19 are also patentably distinguishable over Machida et al. at least because these claims respectively include all the limitations recited in independent claim 2.

Independent Claim 40

Applicants respectfully traverse the rejection of claim 40. Claim 40 recites a method of manufacturing a display device comprising, among other things, “a partition wall-sided electrode provided on the partition wall for each of the pixels and connected to the voltage applying means.” The Examiner admitted that Machida et al. do not disclose a display device comprising “a partition wall-sided electrode provided on the partition wall for each of the pixels and connected to the voltage applying means” (see paragraph 9 of the Office Action). Accordingly, a method of manufacturing such a display device is not anticipated by Machida et al.

Applicants, therefore, submit that Machida et al. do not disclose a method of manufacturing a display device including all the limitations recited in claim 40

Based on the foregoing, Machida et al. do not identically describe what is claimed in claims 1-6, 14, 16, 17, 19, 39, and 40. Applicants, therefore, respectfully solicit withdrawal of the rejection of the claims and favorable consideration thereof.

V. The Rejection of Claims 9-13

Claims 9-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Machida et al. in view of Holman et al.

Claims 9-13 depend from independent claim 2. Applicants incorporate herein the arguments previously advanced in responding to the imposed rejection of claim 2 under 35 U.S.C. §102(e) for anticipation evidenced by Machida et al. The Examiner's additional comments and secondary reference to Holman et al. do not cure the previously argued deficiencies in Machida et al.

Accordingly, the applied combination does not teach a display device including all the limitations recited in claims 9-13. Applicants, therefore, respectfully solicit withdrawal of the rejection of the claims and favorable consideration thereof.

VI. The Rejection of Claim 15

Claim 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Machida et al. in view of Hasegawa et al.

Claim 15 depends from independent claim 2. Applicants incorporate herein the arguments previously advanced in responding to the imposed rejection of claim 2 under 35 U.S.C. §102(e) for anticipation evidenced by Machida et al. The Examiner's additional comments and secondary reference to Hasegawa et al. do not cure the previously argued deficiencies in Hasegawa et al.

Applicants specifically note that Hasegawa et al. do not teach a vibration-generating portion including a piezoelectric material. In Hasegawa et al., a piezoelectric transducer directly amplifies a direct current data signal provided from a data signal line, and outputs it to an

electrophoretic ink display element (see column 7, lines 66-67; column 8, lines 24-26; and column 9, lines 2-23). The piezoelectric transducer of Hasegawa et al. is used as a direct voltage amplifier for amplifying a direct voltage. In order for the piezoelectric transducer to function as a direct voltage amplifier, the piezoelectric transducer needs to be “constrained so as to be pressed on” as described in Hasegawa et al. (column 9, lines 2-7). A piezoelectric transducer generates no voltage unless it is deformed. For this reason, the piezoelectric transducer of Hasegawa et al. does not mechanically vibrate and thus is not used as a vibration generator. Accordingly, Hasegawa et al. do not teach a vibration-generating portion including a piezoelectric material.

Based on the foregoing, Applicants submit that the applied combination does not teach a display device including all the limitations recited in claim 15. Withdrawal of the rejection of claim 15 is, therefore, respectfully solicited.

VII. The Rejection of Claims 36/2 and 38/2

Claim 36/2 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Machida et al. in view of Harada et al.; and claim 38/2 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Machida et al. in view of Sakamaki et al.

Claims 36/2 and 38/2 depend from independent claim 2. Applicants incorporate herein the arguments previously advanced in responding to the imposed rejection of claim 2 under 35 U.S.C. §102(e) for anticipation evidenced by Machida et al. The Examiner’s additional comments and secondary reference to Harada et al. and Sakamaki et al. do not cure the previously argued deficiencies in Machida et al.

Accordingly, the applied combination does not teach a display device including all the limitations recited in claims 36/2 and 38/2. Applicants, therefore, respectfully solicit withdrawal of the rejection of the claims and favorable consideration thereof.

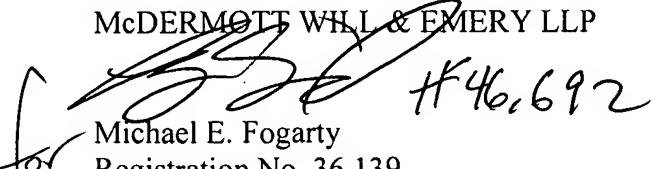
VIII. Conclusion

It should, therefore, be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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